

REMARKS

Claims 1 – 48 are pending in this application. Claims 35 – 47 are withdrawn from consideration. Claims 1, 13, 14 and 18 have been amended to more particularly distinguish and define the inventions over the prior art and claim 19 has been written as an independent claim as new claim 48. The allowability of claim 19 is hereby acknowledged. In view of the foregoing amendments and following remarks, reconsideration of the application is respectfully requested.

Claims 1, 13, 14 and 18 have been amended to overcome the rejections under 35 U.S.C. 112. The rejection is hereby overcome.

Claims 1-8, 10, 11, 14 – 18, 20 -27, 20, 31 and 33 were rejected under 35 USC 102(b) as being anticipated by Lee et al., U.S. Patent No. 6,033,582 (Lee '582). It is the Examiner's opinion that Lee '582 discloses a method of making a post having material attached comprising applying a plasma treatment to the surface of the post and applying resinous filling material to the surface-treated post. Claims 9, 12 and 13 were rejected under 35 USC 103(a) as being unpatentable over Lee '582 in view of Seerem et al., U.S. Patent No. 6,287,122 (Seerem '122). It is the Examiner's opinion that Lee '582 discloses a method that shows the limitations as described above, but does not show composite material comprising fiber-reinforced material. The Examiner cites Seerem '122 to teach a post of fiber-reinforced composite material. The Examiner concludes that it would have obvious to one having ordinary skill in the art at the time the invention was made to modify material of Lee '582 in order to reduce stress and control stiffness of the post in view of Seerem '122. Claims 28 and 29 were rejected under 35 USC 103(a) as being unpatentable over Lee '582. It is the Examiner's opinion that Lee '582 discloses a method that shows the limitations as described above, however it does not show bioactive filler comprising bone. The Examiner concludes that it would have obvious to one having ordinary skill in the art to modify the bioactive filler of Lee '582 to comprise bone as it teaches devices with fillers of biological species. Claims 32 and 34 were rejected under 35 USC 103(a) as being unpatentable over Lee '582 in view of Blackwell et al., US Patent No. 6,391,940 (Blackwell '940). It is the Examiner's opinion that Blackwell '940

teaches the use of resinous material having bond strength with metal structure greater 2.3 MPa. The Examiner concludes that it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method to have the material of Blackwell '940 in order to use a material with superior adhesive strength. For the reasons set forth below, the rejections are respectfully traversed.

The claimed invention is directed to a method of making a single unit endodontic post or endodontic obturator having filling material attached thereto wherein the post or obturator are used for insertion in a root canal comprising applying a corona or plasma treatment to the surface of the endodontic post or endodontic obturator, applying resinous filling material to the surface of the endodontic post or endodontic obturator, and wherein the pull out force between the filling material and the endodontic post or endodontic obturator is at least 56 percent or greater than the pull out force between the filling material and the endodontic post or endodontic obturator which uses no corona or plasma treatment and is at least 30 percent or greater than the pull out force between the filling material and the endodontic post or endodontic obturator which uses silane treatment prior to application of the filling material to the endodontic post or endodontic obturator.

None of the references teach the claimed invention. Lee '582 is directed to surface modification of medical implants, which implants include orthopedic prostheses, heart valves, artificial organs and organ-repair implants, cardiovascular, vascular and associated implant device, blood vessels and vascular grafts, heart valves, blood oxygenators, catheters, balloon angioplasty catheters, urinary tract catheters, central venous catheters, shunts, intravenous (iv) solution delivery, electrodes, implant wire insulation, and other medical devices (sutures, surgical staples, and surgical grafts, meshes, screens, and patches, otological prostheses used in ear cases where the fine bone structure of the ear has been traumatized and dental prostheses for reconstructive surgery and bone repair would also benefit from the use of the inventive method and subsequent coating processes). Lee '582 also mentions that dental prosthetics are often made of titanium metal. The types of devices mentioned in Lee '582 are unlike the endodontic posts and obturators of the claimed inventions.

The Examiner is respectfully requested to direct her attention to the articles submitted herewith on the attached IDS form. Root canal therapy involves the removing

of infected pulp tissue from the root canal and filling it with a filling material such as gutta percha. The obturator with filling material thereon or the post with filling material thereon are types of materials that may be used to fill the root canal. A post is used when it is necessary to build a core on top of the tooth and extra strength is needed to hold the core. An obturator is used when strength is not an issue. In the article entitled "Endodontics – Root Canals" it states on page 2 under the heading Root Canal Cost that "[i]t is generally less expensive to have root canal therapy and save a tooth than the more painful and expensive alternative and expensive alternative of losing the tooth to an infection and needing a dental implant or bridgework." Accordingly, filling materials are used for root canal procedures and implants are used when it is not possible to perform a root canal, the tooth is lost, and must be replaced with an implant.

As stated in the article entitled "Implant Dentistry- A Solution for Missing Teeth," "[a] doctor skilled in implant dentistry surgically places a titanium screw or post in the patient's jaw." A post for use as an implant is not the same as a post used for endodontic purposes. An implant screw or post is inserted into the patient's jaw. A post for endodontic purposes is inserted into the patient's root canal. They are completely different devices and made of different materials. The implant post must be very strong to support a tooth and the stresses effecting a tooth. The endodontic post is inside the tooth root and is not required to be nearly as strong as an implant post.

Lee '582 is directed to implants for inserting into a person's jaw, not posts used for endodontic purposes. Seerem '122 and Blackwell '940 do not cure the deficiencies of Lee '582. There is no motivation to combine the Seerem '122 which is directed to an endodontic post for use in root canals with Lee '582 which is directed to implants. Blackwell '940 is directed to adhesives, luting cements, liners, pit and fissure sealants, bases and restoratives and does not show or suggest adhering filling materials to posts and obturators. None of the references, singly or in combination, show, suggest or teach the claimed invention.

In summary, none of the references teach a method of making a single unit endodontic post or endodontic obturator having filling material attached thereto wherein the post or obturator are used for insertion in a root canal comprising applying a corona or plasma treatment to the surface of the endodontic post or endodontic obturator,

applying resinous filling material to the surface of the endodontic post or endodontic obturator, and wherein the pull out force between the filling material and the endodontic post or endodontic obturator is at least 56 percent or greater than the pull out force between the filling material and the endodontic post or endodontic obturator which uses no corona or plasma treatment and is at least 30 percent or greater than the pull out force between the filling material and the endodontic post or endodontic obturator which uses silane treatment prior to application of the filling material to the endodontic post or endodontic obturator.

Accordingly, it is believed that claims 1 – 34 and 48 specify patentable subject matter and are now in condition for allowance. Applicants therefore respectfully request favorable reconsideration and allowance of this application. The Examiner is requested to telephone Applicants' attorney at the number listed below if it will advance the prosecution of this case. If necessary, the Examiner is authorized to charge further fees necessary to advance the prosecution in this case from Deposit Account No. 500718.

Respectfully submitted,

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